PETROLEUM WATCH
Transportation Energy Office
Fuels and Transportation Division
California Energy Commission

**September 18, 2012** 

### Summary

As of September 17, retail regular-grade gasoline prices in California rose by 3 cents since the previous *Petroleum Watch* to \$4.16 per gallon, while retail diesel prices rose by 16 cents to \$4.47 per gallon. California retail gasoline prices leveled off soon after the Richmond refinery fire, and diesel prices continued higher until early September but have since leveled off as well.

California spot wholesale gasoline prices decreased 3 cents to \$3.09 per gallon, a rise of less than a percent. Wholesale diesel, however, rose 23 cents to \$3.39, a 7 percent rise.

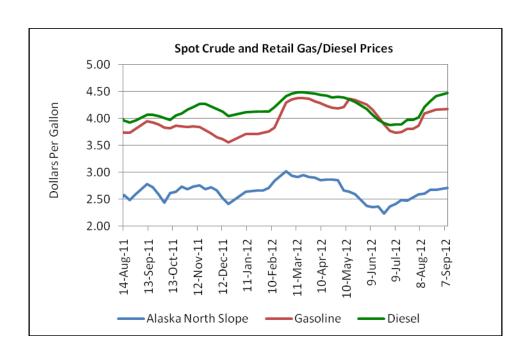
Refinery production of California-compliant gasoline fell by 10.4 percent while inventories fell 7.5 percent in the past week. However, production of California-compliant diesel increased by 10.5 percent, and inventories increased by 19.6 percent. In the past month there have been only a few minor unplanned refinery problems, notwithstanding the Richmond refinery issue.

World crude oil prices have risen over the past month. Brent oil prices have risen to \$114.86 per barrel, while West Texas Intermediate (WTI) prices have risen to \$97.03 per barrel. As of September 11, Alaska North Slope (ANS) crude oil prices rose to \$114.67, \$5.14 more than a month ago.

### Comparisons of Diesel, Gasoline, and Crude Oil Price Changes

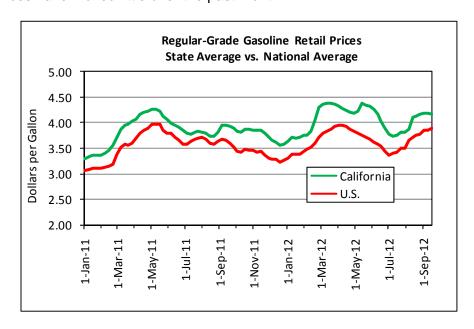
Gasoline and diesel prices have risen for a second consecutive month. As of September 10, ANS prices reached \$2.72 per gallon, gasoline prices were \$4.18 per gallon, and diesel prices were \$4.48 per gallon.

Gasoline, ANS, and diesel prices are 47 cents higher, 8 cents higher, and 37 cents per gallon higher, respectively, compared to January 9, 2012. Gasoline prices have increased sharply in response to the fire at the Chevron refinery in Richmond, but crude oil price increases have contributed to gasoline and diesel price increases as well.

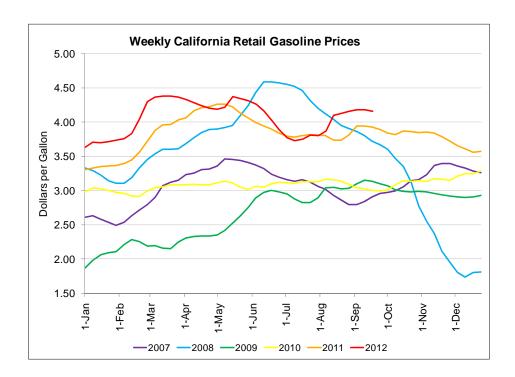


#### Retail Prices

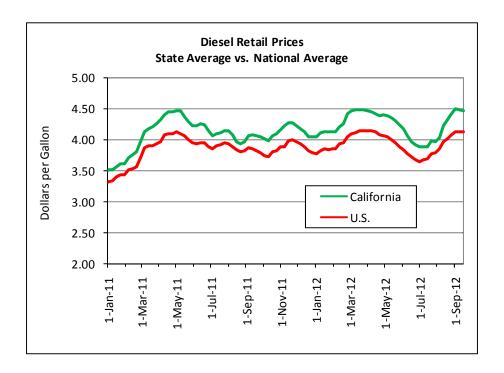
The average California **retail price for regular-grade gasoline** increased 3 cents over the past month, rising to \$4.16 per gallon, and is 23 cents higher than this time last year. Average U.S. retail gasoline prices increased 14 cents from a month ago to \$3.88. Average U.S. gasoline prices are 28 cents more than a year ago. The difference between California and U.S. retail gasoline prices fell from 39 cents to 28 cents over the past month, which is just below the 2009-2011 average of 31 cents per gallon. Retail prices continue to follow the oil price upward, but California prices have moved little over the past month.



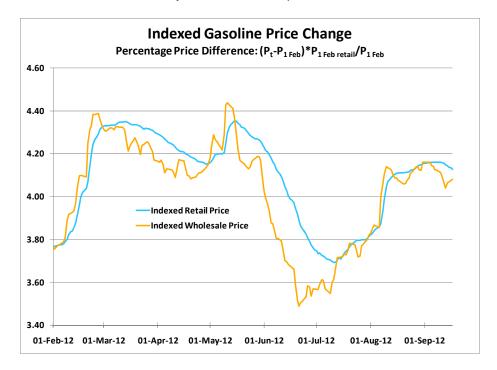
California retail prices remain at all-time seasonal highs, remaining above 2011 levels.



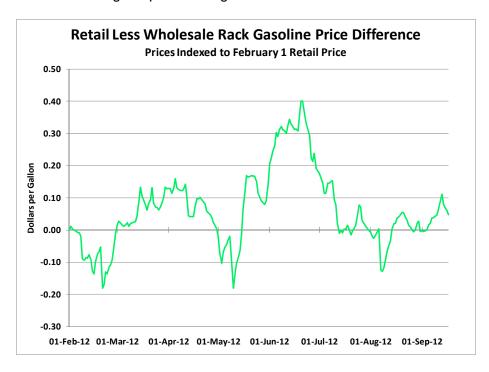
The average California **retail diesel price** rose 16 cents over the past month to \$4.47 per gallon. The average U.S. retail diesel price rose 11 cents over the past month to \$4.14 per gallon. As a result, the premium for California diesel over U.S. diesel prices increased from 29 cents to 33 cents over the past month. California diesel prices are 40 cents higher than a year ago, and U.S. diesel prices are 30 cents higher than a year ago. Although California gasoline prices have leveled off following the fire, California diesel prices continued to rise until early September, due to the drop in diesel production.



Retail prices continue to move closely with wholesale prices.



The differential between retail and wholesale prices has risen over the past month but has moved relatively little compared to the large swings seen earlier this year after the refinery fire in Washington state and during the peak driving season.

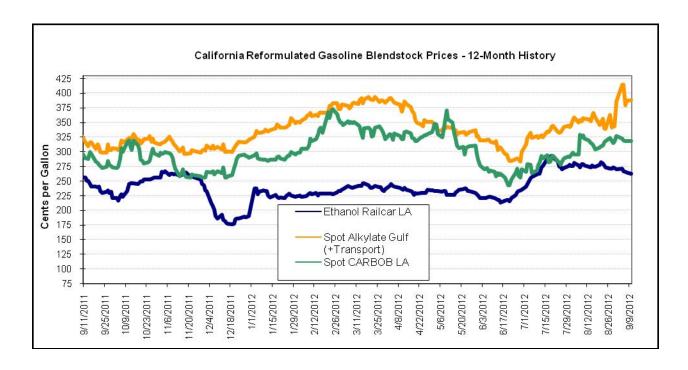


#### Wholesale Gasoline and Blendstock Prices on September 13, 2012

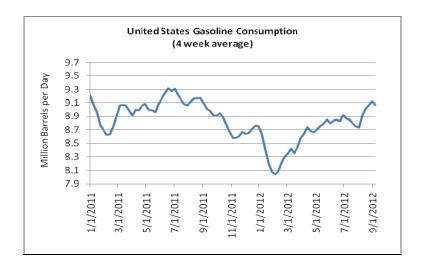
California spot wholesale gasoline prices for regular-grade reformulated blendstock for oxygenate blending (RBOB) fell slightly to \$3.09 per gallon, 3 cents less than a month ago but still 19 cents over the same time last year. Prices in New York have seen a more consistent increase, up 13 cents over the month and 36 cents from the previous year.

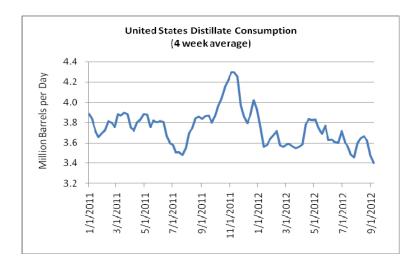
The diesel market in California shows a much higher climb than gasoline, mostly attributed to lasting impact from the Richmond, California, refinery fire in early August. California average spot wholesale ultra-low-sulfur diesel prices stood at \$3.39, 23 cents above the past month despite a 6-cent drop over the past week. Prices in New York also rose since last month, tacking on 13 cents to \$3.27.

The average representative estimated cost of **fuel ethanol** to California refiners and marketers fell 12 cents to \$2.63 per gallon as of September 10, 2012. Despite this decrease, ethanol prices remain elevated in response to low corn yields.



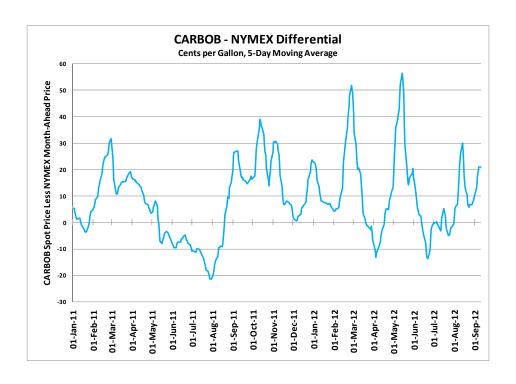
The Energy Information Administration's (EIA) weekly report for the week ending September 7 shows the four-week averages for consumption at 9.0 million gallons of gasoline (a 0.1 percent decrease from a year ago) and 3.4 million gallons of diesel (a 11.9 percent decrease). This decrease, while striking, is not without precedent; decreases of similar magnitudes (and corresponding rebounds) have occurred nine times since 2008.



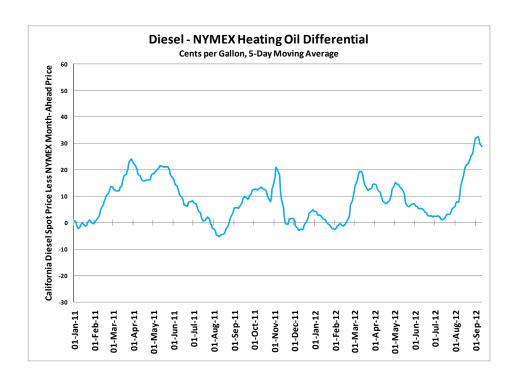


# Futures-Spot Market Spread

As of September 10, the spot market price for **California gasoline** was at a 21-cent premium to the New York Mercantile Exchange (NYMEX) one-month-ahead futures price, using five-day moving averages. This is down from the 27-cent premium seen in August's *Petroleum Watch* but remains well above the two-year average of 9 cents, indicating that supplies in the California market have been scarce relative to the rest of the country. The August 6 fire at the Richmond refinery influenced only West Coast gasoline prices and only for a few days. The differential spiked immediately after the fire at 30 cents but soon subsided and then resumed its gradual path upward from the mid-June lows. Both California gasoline and NYMEX futures prices have moved up since then, following the price of oil, but California prices have risen faster, due to a drop in California production in early September.

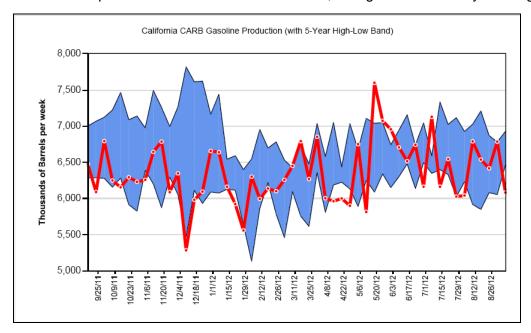


As of September 10, **California diesel** sold at a premium of 29 cents to the NYMEX heating oil one-month ahead futures price, using five-day moving averages, up from 19 cents in the August *Petroleum Watch*, and well above the two-year average premium of 8 cents. The spread increased sharply after the Richmond fire and continued higher to its highest level since April 2007, breaking out of the band it had been in since 2009. This reflects the rise in price due to the reduction in California diesel supply immediately following the fire, which had little if any effect on the NYMEX price. California diesel supplies have been unusually tight as a result. As seen in the section below, California diesel production fell 30 percent immediately after the fire, and inventories simultaneously began to fall. Consequently the price differential rose and has continued to rise until the end of August, in stark contrast to the gasoline market. Production and inventories have since rebounded, but this is only just starting to be visible in diesel prices.

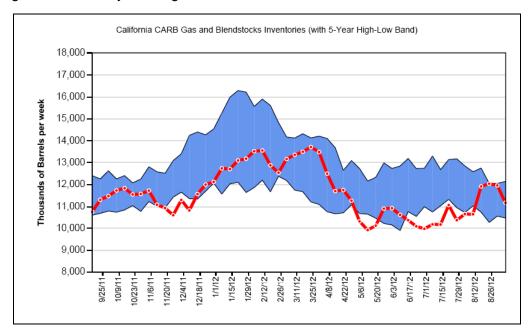


## Refinery Production and Inventories

**Reformulated gasoline production** in California for the week ending September 7 decreased 10.4 percent from the previous week to 6.1 million barrels, falling below the five-year range.<sup>3</sup>

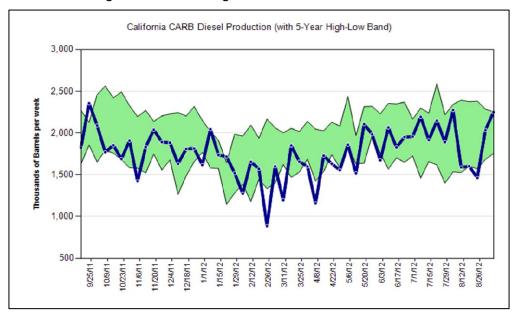


California **reformulated gasoline inventories** decreased 7.5 percent from the past week, while gasoline blendstock inventories decreased 5.9 percent. California's combined inventories of reformulated gasoline and gasoline blendstocks decreased 6.6 percent to 11.2 million barrels, remaining within the five-year range.

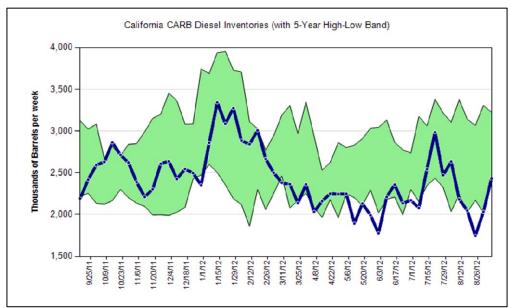


As of September 7, U.S. gasoline inventories decreased to 197.7 million barrels, 1.2 million barrels less than the previous week. Inventories increased by 0.23 million barrels on the East Coast but decreased by 1.4 million barrels on the Gulf Coast and 7,000 barrels in the West Coast.

California-compliant **ultra-low-sulfur diesel fuel (CARB diesel) production**<sup>4</sup> was 2.2 million barrels during the week ending on September 7, an increase of 10.5 percent from the previous week, rising to the top of the five-year range. Current production of CARB diesel is now 42 percent above the average level in mid-August.



**Inventories of CARB diesel** in California increased 19.6 percent from the previous week to 2.4 million barrels, rising to the bottom of the five-year range. Following CARB diesel production, current inventories are 39 percent higher than they were in mid-August. The world market for diesel has been in short supply, and on a national level, the United States is exporting 0.97 million net barrels per day of distillate products, which supports increasing diesel production.



U.S. distillate inventories as of September 7 rose to 128.6 million barrels, 1.5 million barrels more than the previous week, and inventories increased 0.56 million barrels on the West Coast. While California distillate inventories are up 14.6 percent compared to last year, U.S. inventories are down 18.9 percent from this time a year ago.

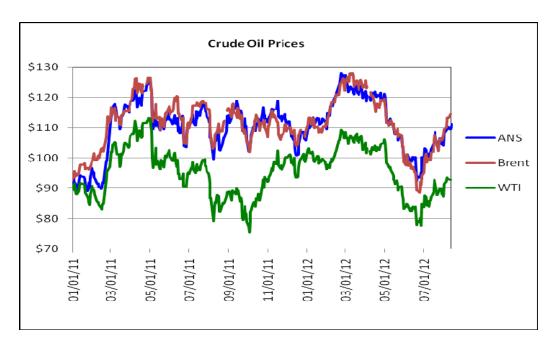
#### Crude Oil Prices and Associated Factors

West Coast prices for ANS crude oil, a refinery feedstock for California, rose to \$114.67 as of September 11. Prices have risen \$5.14 since the previous *Petroleum Watch* but are \$4.14 less than a year ago. <sup>5</sup> ANS crude oil price changes are influenced by inventory levels, refinery capacity, domestic and international economic conditions, currency exchange rates, perceived risks to global supply such as unrest in the Middle East, and near-term price trends as indicated by the futures market for crude oil. Over the past month, declining inventory levels, a weakening of the dollar, and increases in the S&P 500 and STOXX 50 have pushed oil prices up.

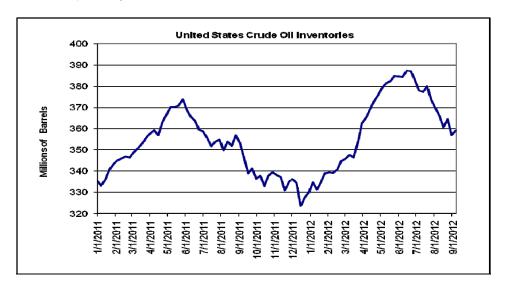
**Recent Trends in Crude Oil Prices** 

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			Change from	Directional Contributing Factor		
	August 2012	September 2012	previous Month	Upward	Downward	Unchanged
ANS Crude Oil Price (U.S. Dollars /Barrel)	\$109.53	\$114.67	Up 4.7%			
Europe Brent Crude Oil Price (U.S. Dollars/Barrel)	\$114.48	\$114.86	Up 3.3%			
West Texes Intermediate, Cushing Oil Price (U.S. Dollars/Barrel)	\$92.76	\$97.03	Up 4.6%			
U.S. Crude Oil Inventories (MM Barrels)	366.20	359.09	Down 1.9%	\		
S&P 500	1,404	1,434	Up 2.1%			
EURO STOXX 50 Price	2,553	2,559	Up 0.2%	1		
Total Dollar Index	82	80	Down 3.1%			
Exchange rate: Dollars per Euro	1.23	1.29	Up 4.9%			
European Debt Problems						
Disruption in Oil Exports						

The spread between West Texas Intermediate crude oil prices and the Brent crude oil contracts has widened, averaging \$18.81 since the last *Petroleum Watch*. West Texas Intermediate-NYMEX futures traded at \$97.03 per barrel as of September 11, \$17.64 less than ANS crude oil



U.S. crude oil inventories have increased slightly over the past week but decreased over the last month. As of September 7, U.S. commercial crude oil inventories rose by 2.0 million barrels from the previous week to 359.1 million barrels. Crude oil stocks are 12.7 million barrels more than a year ago and 26.7 million barrels more than the five-year average for this date. California crude oil stocks rose 20.1 percent from the previous week to 15.8 million barrels and are 9.2 percent more than a year ago.



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<sup>&</sup>lt;sup>1</sup> Retail gasoline and diesel prices and U.S. crude oil and product inventory estimates are from the Energy Information Administration of the U.S. Department of Energy.

<sup>&</sup>lt;sup>2</sup> Ethanol railcar prices are from *Platts Oilgram* and are average prices for prompt Southern California shipments minus a 45¢/gal federal excise tax credit for 2009 through 2011 prices and a 51¢/gal federal excise tax credit for prices prior to 2009. The federal excise tax credit expired at the end of 2011. California alkylate prices are also calculated from Platts Oilgram and include a 20¢/gal transportation and distribution cost from Gulf Coast to California. Spot wholesale prices for regular-grade California reformulated gasoline blendstock for oxygenate blending (CARBOB) are from Oil Price Information Service.

<sup>&</sup>lt;sup>3</sup> California refinery production and inventory information is from the Petroleum Industry Information Reporting Act (PIIRA) database maintained by the California Energy Commission.

<sup>&</sup>lt;sup>4</sup> Staff has discontinued the reporting of combined CARB and EPA diesel production and inventories and will report only CARB diesel as of December 2009. EPA diesel is primarily for export from California.

<sup>&</sup>lt;sup>5</sup> Alaska North Slope (ANS) crude oil prices are from *The Wall Street Journal*. Brent and West Texas Intermediate (WTI) crude oil prices are from the Energy Information Administration.